

07/22/02 1130 U.S. PTO

COPY OF PAPERS
ORIGINALLY FILED

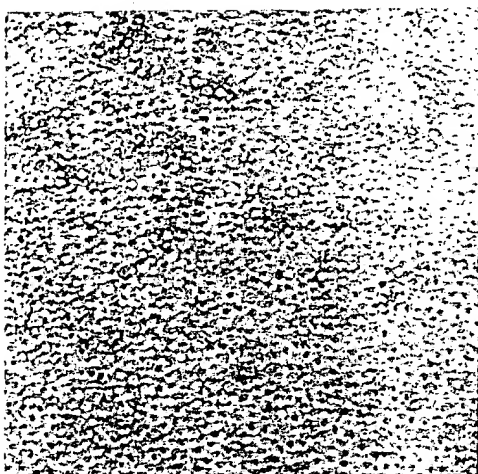


FIG. 1A

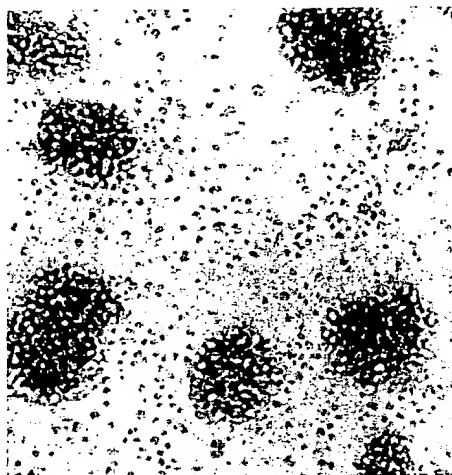


FIG. 1B

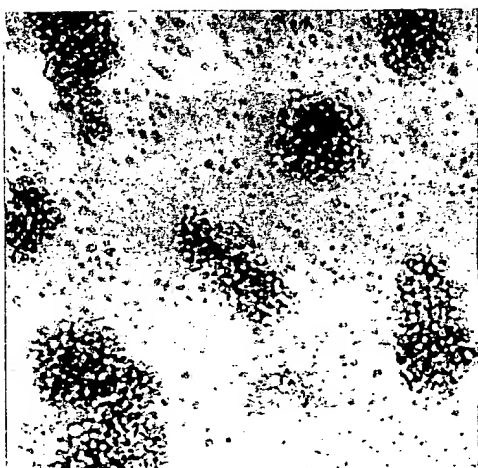


FIG. 1C

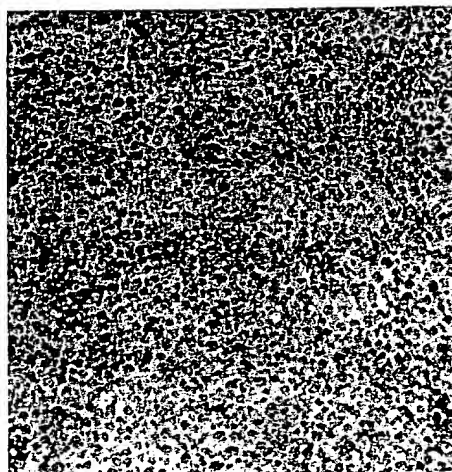
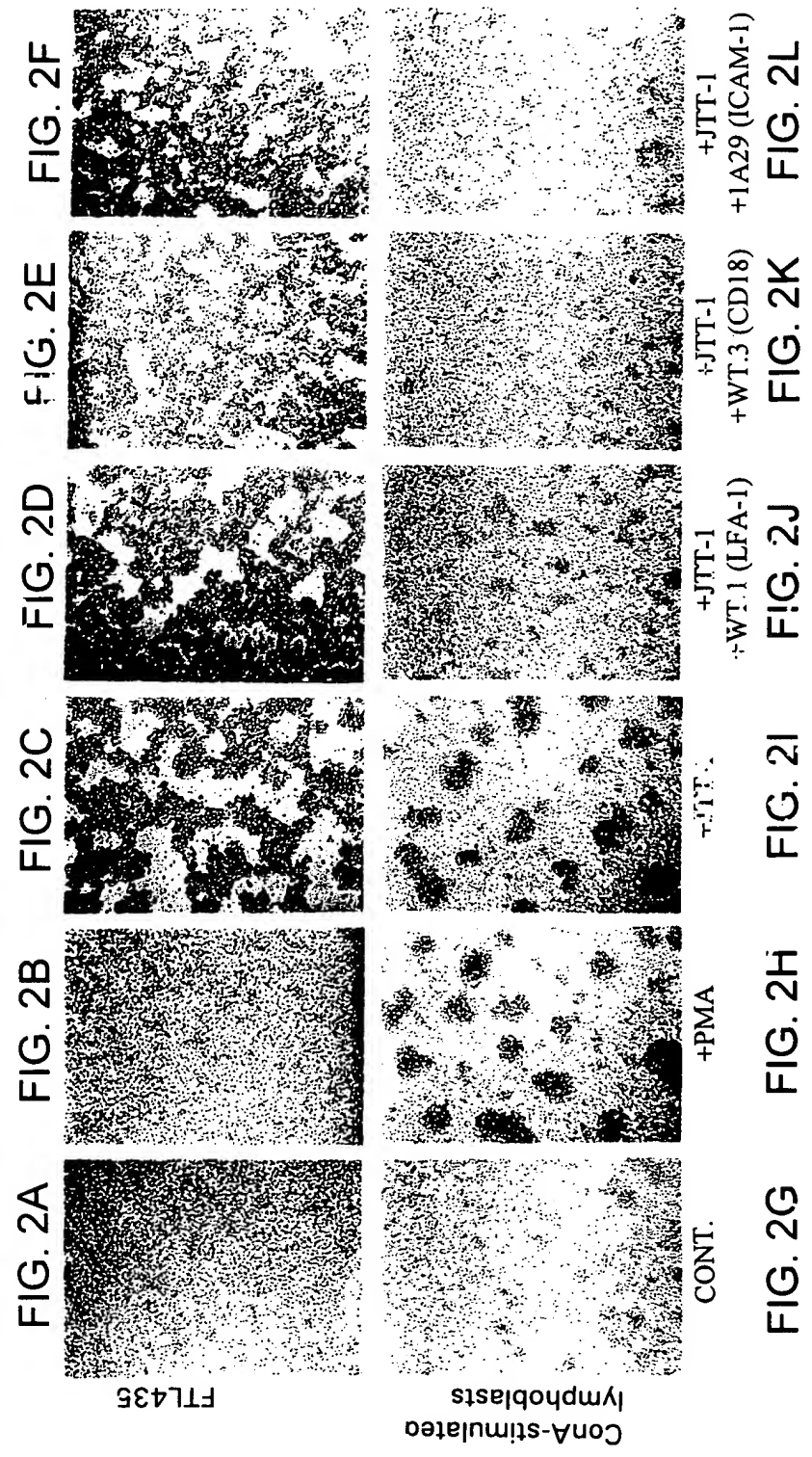


FIG. 1D

07/22/02
1130 U.S. PTO

COPY OF PAPERS
 ORIGINALLY FILED





COPY OF PAPERS
ORIGINALLY FILED

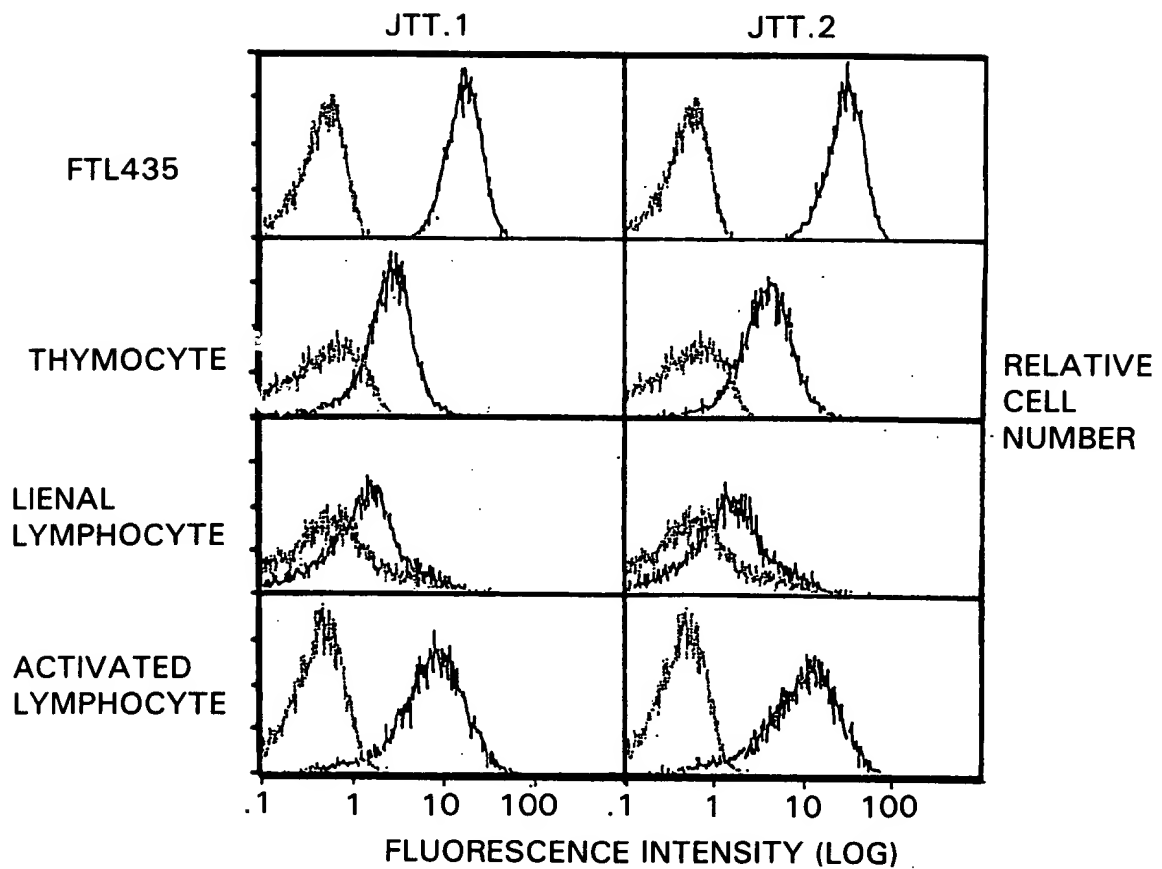
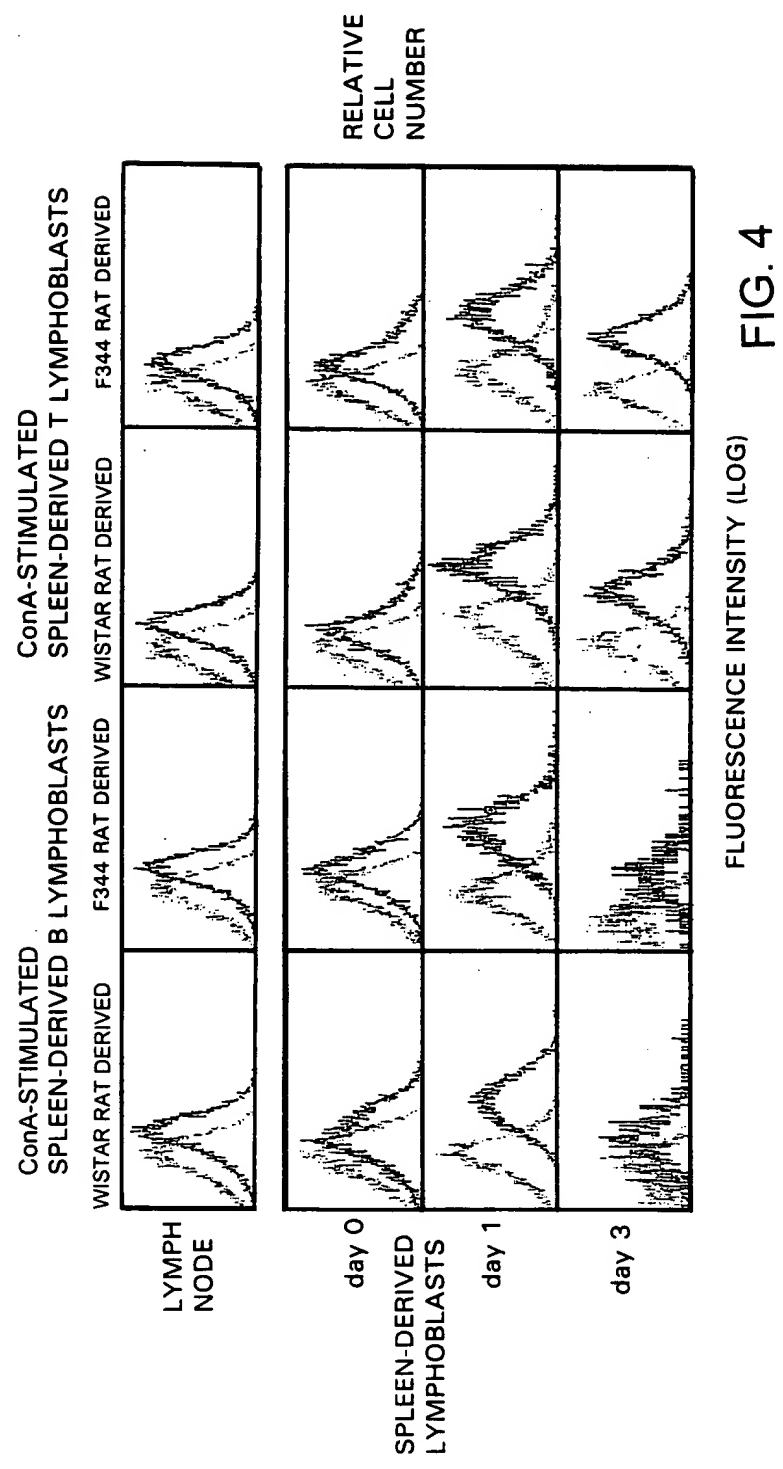


FIG. 3



14130 U.S. PTO
07/22/02

COPY OF PAPERS
ORIGINALLY FILED

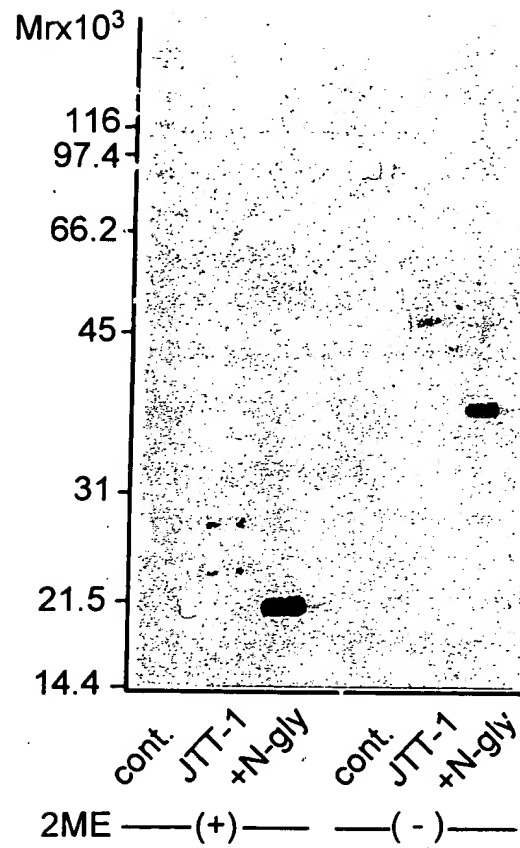


FIG. 5



COPY OF PAPERS
ORIGINALLY FILED

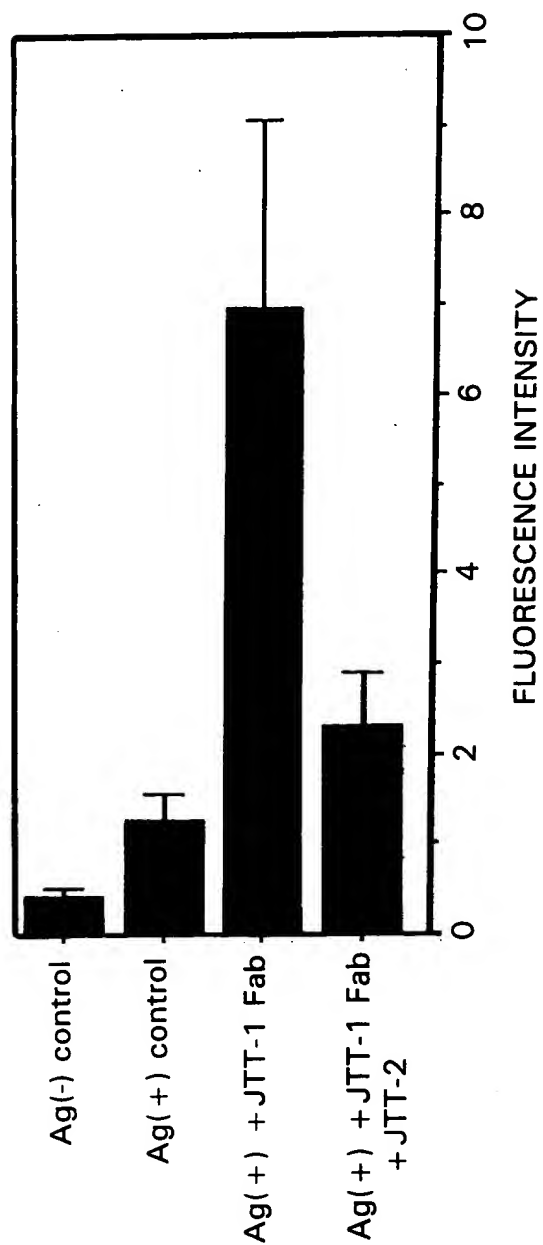


FIG. 7



COPY OF PAPERS
ORIGINALLY FILED

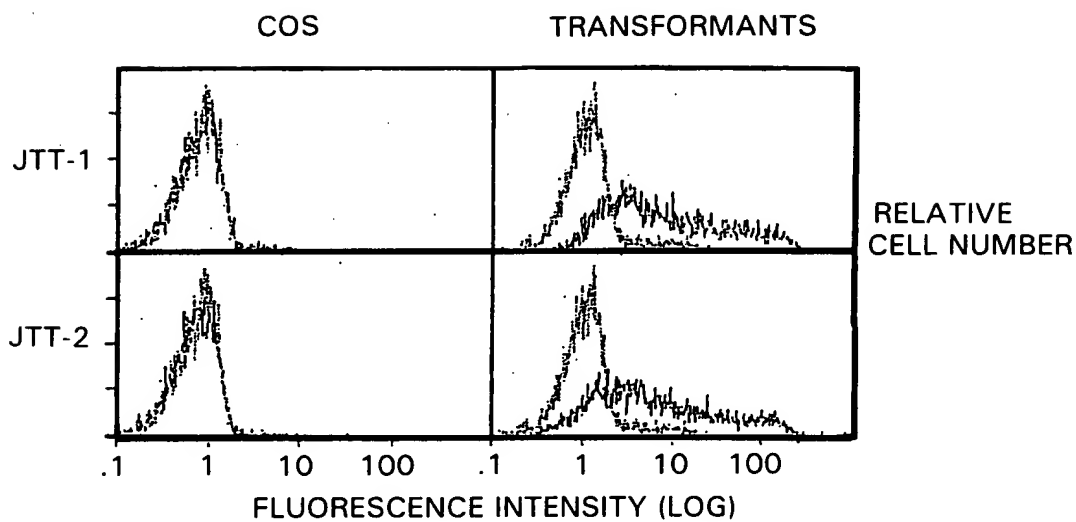


FIG. 8

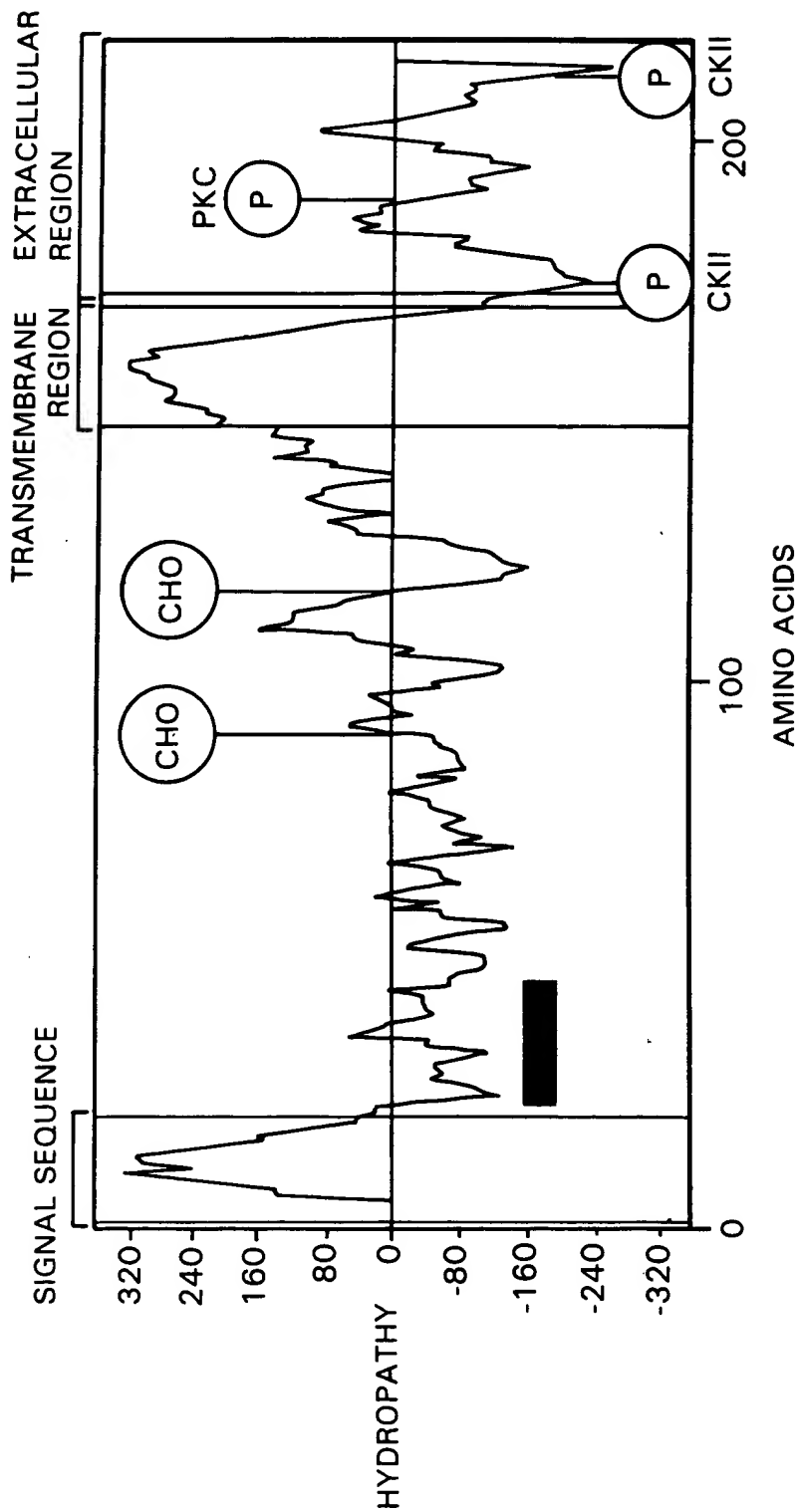


FIG. 9



human	M	K	S	G	L	W	Y	F	F	L	F	C	L	R	I	K	V	L	T	G	E	I	N	G	S	A	N	Y	E	M	F	I	F	H	N	G	G	V	Q	I	L	C	K	Y	P	P	E	T	V	Q	Q	50	
rat	M	K	P	Y	F	S	C	V	F	V	F	C	F	L	I	K	L	L	T	G	E	E	L	N	D	L	A	N	H	R	M	F	S	F	H	D	G	G	V	Q	I	S	C	N	Y	P	E	T	V	Q	Q	50	
rat mutant	M	K	P	Y	F	S	C	V	F	V	F	C	F	L	I	K	L	L	T	G	E	E	L	N	D	L	A	N	H	R	M	F	S	F	H	D	G	G	V	Q	I	S	C	N	Y	P	E	T	V	Q	Q	50	
mouse	M	K	P	Y	F	S	C	H	V	F	V	F	C	F	L	I	R	L	L	T	G	E	I	N	G	S	A	D	H	R	M	F	S	F	H	N	G	G	V	Q	I	S	C	K	Y	P	E	T	V	Q	Q	50	
consensus	M	K	P	Y	F	.	.	V	F	V	F	F	C	F	L	I	K	L	L	T	G	E	.	N	.	A	N	H	R	M	F	S	F	H	.	G	G	V	Q	I	S	C	.	Y	P	E	T	V	Q	Q	50		
human	F	K	M	Q	L	L	K	G	G	Q	I	L	C	D	L	T	K	T	K	G	S	G	N	T	V	S	I	K	S	L	K	F	C	H	S	Q	L	S	N	N	S	V	S	F	F	L	Y	N	L	D	100		
rat	L	K	M	Q	L	L	F	K	D	R	E	V	L	C	D	L	T	K	T	K	G	S	G	N	T	V	S	I	K	N	P	M	S	C	P	Y	Q	L	S	N	N	S	V	S	F	F	L	D	N	A	D	100	
rat mutant	L	K	M	Q	L	L	F	K	D	R	E	V	L	C	D	L	T	K	T	K	G	S	G	N	T	V	S	I	K	N	P	M	S	C	P	Y	Q	L	S	N	N	S	V	S	F	F	L	D	N	A	D	100	
mouse	L	K	M	R	L	L	F	R	E	R	E	V	L	C	E	L	T	K	T	K	G	S	G	N	A	V	S	I	K	N	P	M	L	C	L	Y	H	L	S	N	N	S	V	S	F	F	L	N	N	P	D	100	
consensus	L	K	M	Q	L	L	F	K	.	R	E	V	L	C	D	L	T	K	T	K	G	S	G	N	T	V	S	I	K	N	P	M	.	C	.	Y	Q	L	S	N	N	S	V	S	F	F	L	.	N	.	D	100	
human	H	S	H	A	N	Y	Y	F	L	C	S	L	S	I	F	D	P	P	P	P	F	Q	-	V	T	L	T	G	G	Y	L	H	I	Y	E	S	Q	L	C	C	Q	L	K	F	W	L	P	I	G	C	A	A	149
rat	S	S	Q	G	S	Y	F	L	C	S	S	L	S	I	F	D	P	P	P	P	F	Q	E	K	N	L	S	G	G	Y	L	L	I	Y	E	S	Q	L	C	C	Q	L	K	L	W	L	P	V	G	C	A	A	150
rat mutant	S	S	Q	G	S	Y	F	L	C	S	S	L	S	I	F	D	P	P	P	P	F	Q	E	K	N	L	S	G	G	Y	L	L	I	Y	E	S	Q	L	C	C	Q	L	K	L	W	L	P	V	G	C	A	A	150
mouse	S	S	Q	G	S	Y	Y	F	C	S	S	L	S	I	F	D	P	P	P	P	F	Q	E	R	N	L	S	G	G	Y	L	H	I	Y	E	S	Q	L	C	C	Q	L	K	L	W	L	P	V	G	L	P	A	150
consensus	S	S	Q	G	S	Y	.	.	C	S	S	L	S	I	F	D	P	P	P	P	F	Q	E	.	N	L	S	G	G	Y	L	.	I	Y	E	S	Q	L	C	C	Q	L	K	L	W	L	P	V	G	C	A	A	150
human	F	V	V	V	C	I	L	G	C	I	I	L	I	C	W	L	T	K	K	K	Y	S	S	S	V	H	D	P	N	S	E	Y	M	F	M	R	A	V	N	T	A	K	K	S	R	L	L	T	D	V	T	L	199
rat	F	V	A	A	L	L	F	G	C	I	I	F	I	V	W	F	A	K	K	K	Y	S	S	S	V	H	D	P	N	S	E	Y	M	F	M	R	A	V	N	T	A	K	K	S	R	L	L	A	G	M	T	S	200
rat mutant	F	V	A	A	L	L	F	G	C	I	I	F	I	V	W	F	A	K	K	K	Y	S	S	S	V	H	D	P	N	S	E	Y	M	F	M	R	A	V	N	T	A	K	K	S	R	L	L	A	G	T	A	P	200
mouse	F	V	V	V	L	L	F	G	C	I	I	L	I	I	W	F	S	K	K	K	Y	G	S	S	V	H	D	P	N	S	E	Y	M	F	M	R	A	V	N	T	A	K	K	S	R	L	L	A	G	V	T	S	200
consensus	F	V	.	.	L	L	F	G	C	I	I	.	I	.	W	F	.	K	K	K	Y	.	S	S	V	H	D	P	N	S	E	Y	M	F	M	R	A	V	N	T	A	K	K	S	R	L	L	A	G	.	T	.	200
human	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199			
rat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200				
rat mutant	L	R	A	L	G	R	G	E	H	S	S	C	Q	D	R	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	
mouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200			
consensus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216			

FIG. 10

**COPY OF PAPERS
ORIGINALLY FILED**

FIG. 11

JTT1	M	-	-	-	-	-	K S G L	L	-	-	W	-	-	Y F F L	P C L R	I K V	L T G E I N G	S A N Y E M F I	F H	34	
CD28	M	-	-	L	-	-	R L L L	A	-	-	-	-	-	L N L F	- P S	I Q V T	G N K I L V	K Q S P M L V	A Y D	33	
CTLA4	M	A C L G	F Q R H K	A Q L N	L A A R T W	P C T L L	F F L L F	I P V	F C K A M H V	A Q P A V V	L A S S									50	
consensus	M	-	-	L	-	-	L	L A	-	-	W	-	-	L	L F	L	I	V	Q	. . . A	50
JTT1	N G G V	Q I L	C K Y	-	-	P D I V	Q Q F K	M Q L L	K G G Q I L	-	-	-	-	C D L T	K T	K G S G N T	V S I K			78	
CD28	N A V	- N L S	C K Y	S Y N L	F S R E F R	A S L H	K G L D S A	V E V	- C V V Y G N	Y S Q Q L Q	V Y S K									81	
CTLA4	R G I A	S F V	C E Y	A S P G	K A T E V R	V T V L	R Q A D S Q	V T E V	C A A -	- T Y M T G N E L	T F L									98	
consensus	N G	. . . .	C K Y	. . P	. . . E F R	. . L L	K G D S	V	- C	. . . T Y	. . G N	. . V	. . K							100
JTT1	S L K F	C H S Q L S	N N S V	S F F L	Y N L	D H S H	A N Y Y F F	C N L S	I F D	P P P P	F -	-	K V T L	T G						126	
CD28	T G F N	C D G K L G	N E S V	T F Y L	Q Q L	L Y V N	Q T D I Y I F F	C K I E	V M Y P P P P	P P P P	Y Y	-	L G I G N G	T						131	
CTLA4	D D S I	C T G T S S	G N Q V	N L T I	Q Q L	R A M D	T G L Y I I	C K V E	L M Y P P P P	P P P P	Y Y	-	L G I G N G	T						147	
consensus	. . . .	C	G L S	N N S V	F L Q N	L	. . . T	Y F	C K	E M Y P P P P	Y	-	. . . N G	T						150
JTT1	Y L H I	Y E S Q L C	C Q L K	F	-	-	-	-	-	-	L P I G	C A A F	V V V C I L	G C	-	I L I C	W L T K K			167	
CD28	I I H V	K G K H L C	P S P L	P P G P S K	P F W V	L V V V G G	V L A C Y S	L L V T	V A F I	I F W V R S										181	
CTLA4	Q I Y V	I D P E P C	P D S D	F	-	-	-	-	-	-	L W I L	A A V S S	G L F F Y S	F L L T	-	A V S L S K	M L K			191	
consensus	. I H V	. . . L C	P	. . . F	-	-	-	-	-	-	L	. . V	. . . L	. . Y S	L	. T	- A	. I	. . . K	200	
JTT1	K Y S	S S V H D P N	G E Y M	F M F M	R A V N	T A K K	S R	-	-	-	-	-	-	L T D	V T L	-	-	-	-	199	
CD28	K R S	- - - R L L H	S D Y M	N M T P P R R	P P P P	P G P T	R K H Y	Q P P	Y A P P	R D F A A Y	R S									220	
CTLA4	K R S	- - - P L T T	G V Y V	K M P P T E	P E -	C E K Q	F Q P Y	-	-	-	-	-	-	F I P I	N	-				223	
consensus	K R S	- - - L	G Y M	M	P	P	. . . K	. . Q P Y	-	-	-	-	-	D F	. . .	-				242	

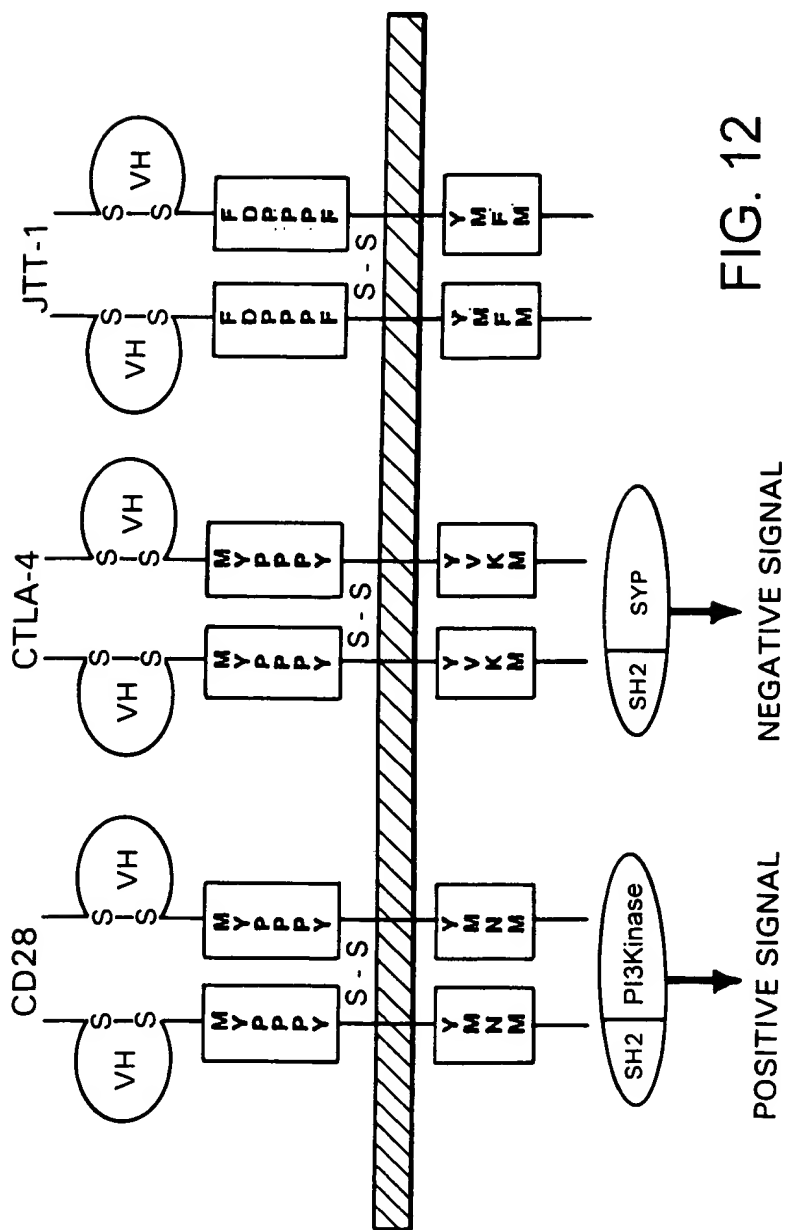
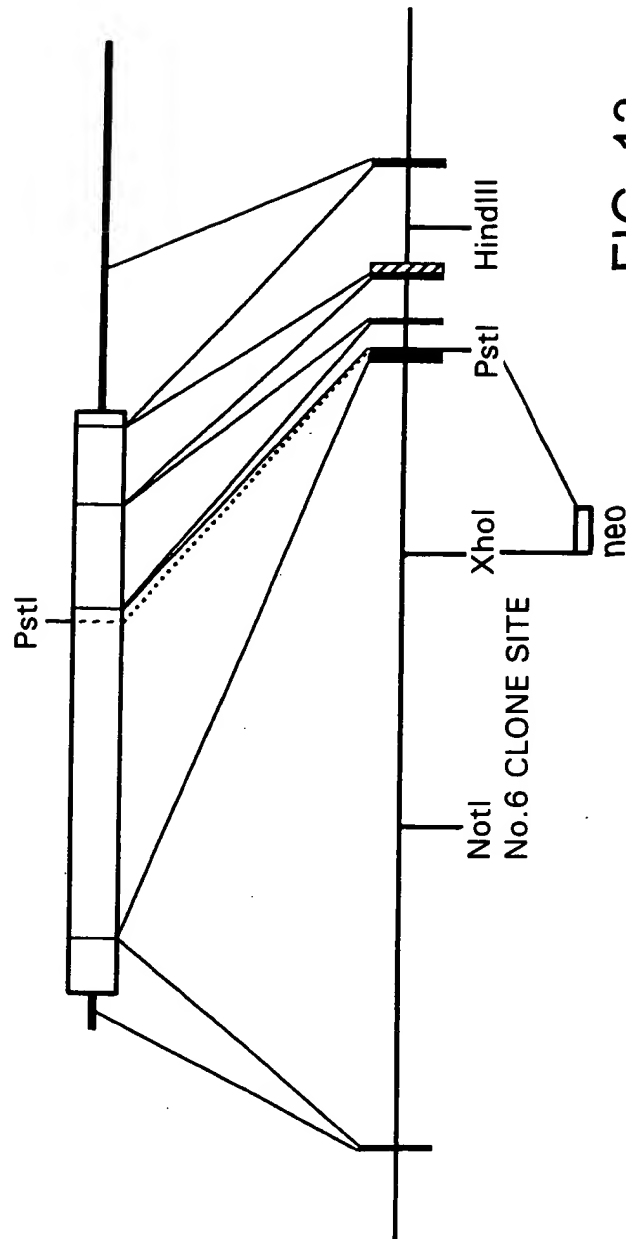


FIG. 12





COPY OF PAPERS
ORIGINALLY FILED

rat	50	
rat mutant	50	
consensus	50	
rat	100	
rat mutant	100	
consensus	100	
rat	150	
rat mutant	150	
consensus	150	
rat	200	
rat mutant	200	
consensus	200	
rat	200	
rat mutant	216	
consensus	216	

FIG. 14



AMOUNT OF
UPTAKE OF
[³H] THYMIDINE
(DPM)

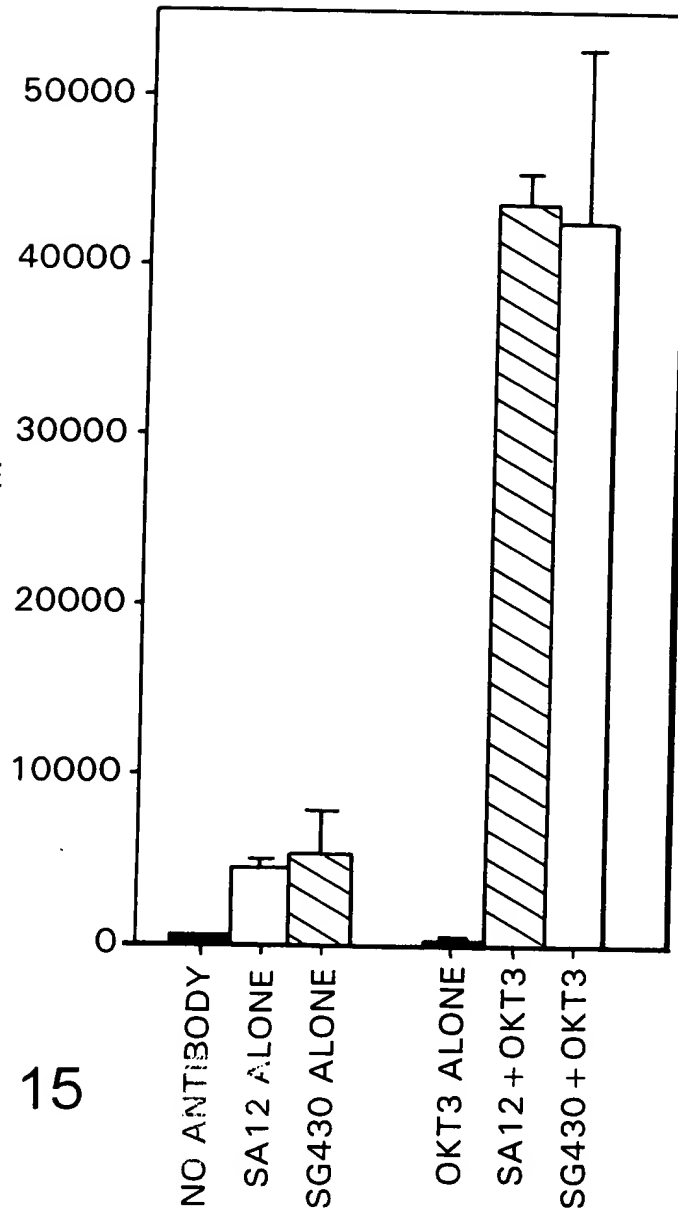


FIG. 15

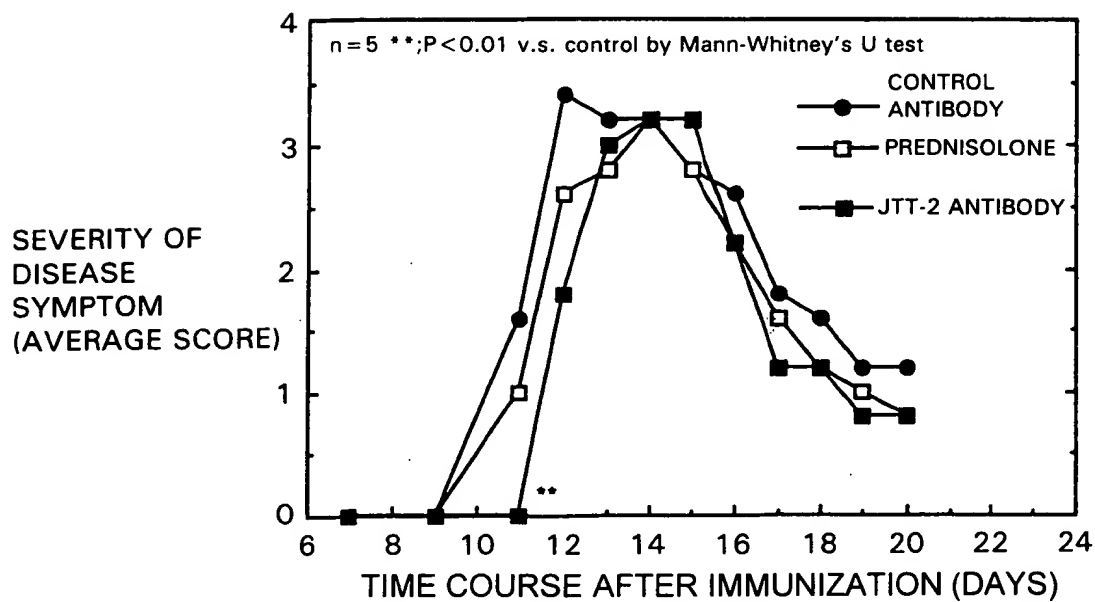
COPY OF PAPERS
ORIGINALLY FILED

FIG. 16

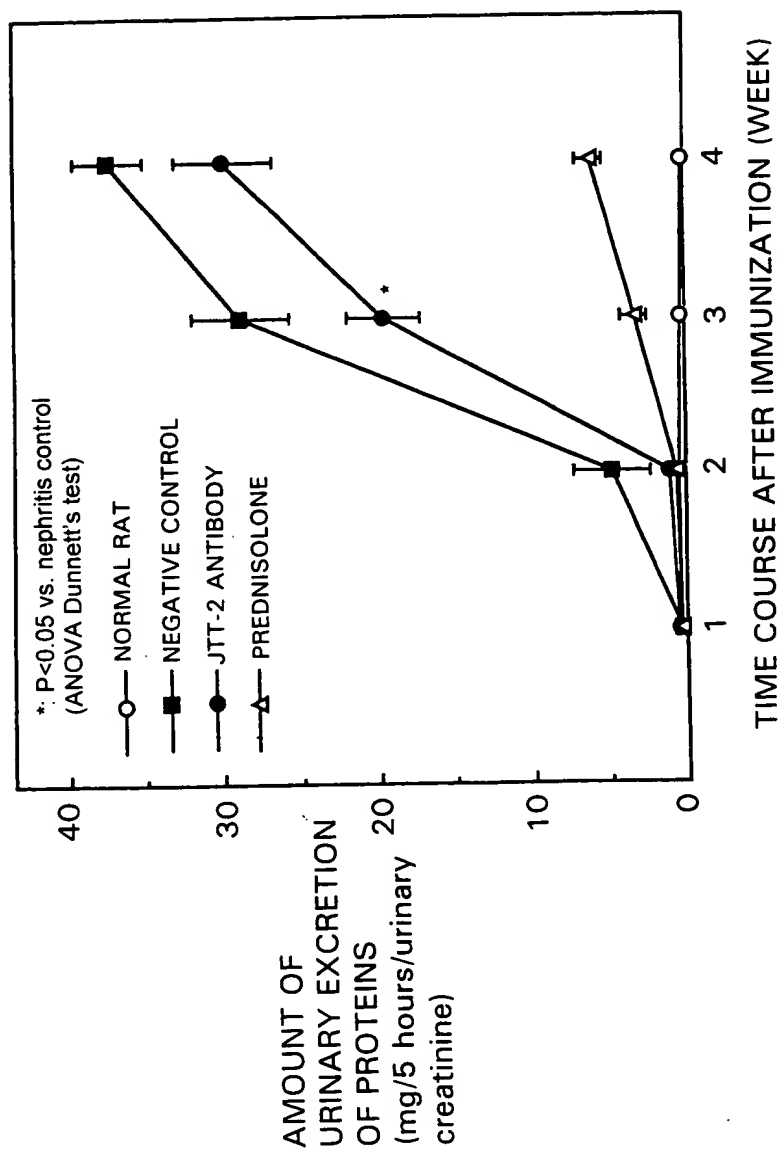
COPY OF PAPERS
ORIGINALLY FILED

FIG. 17



COPY OF PAPERS
ORIGINALLY FILED

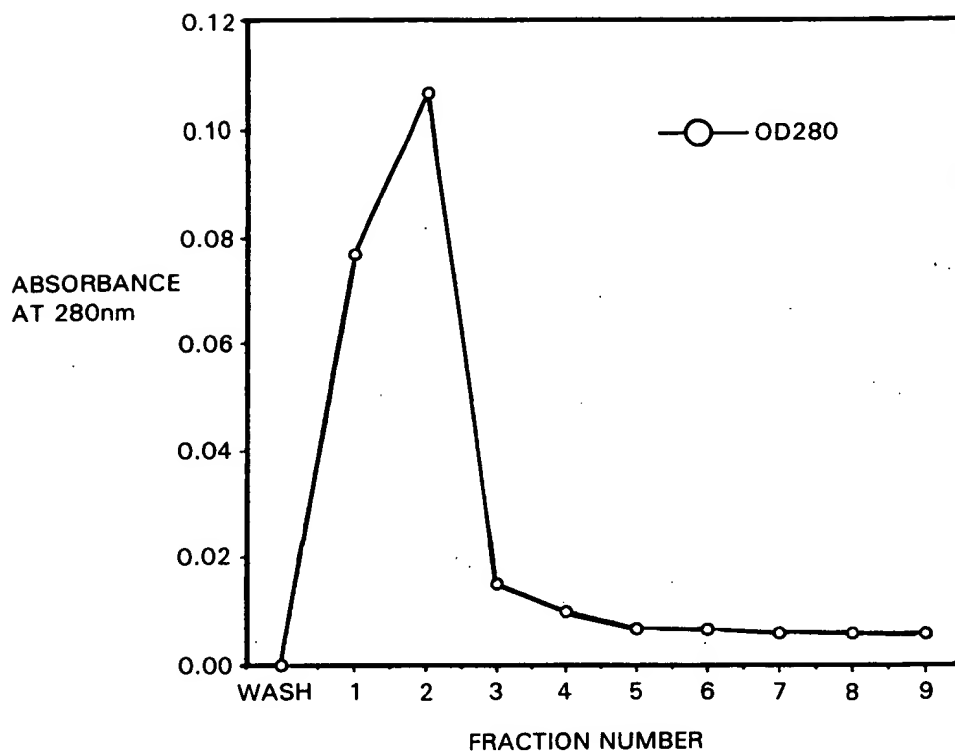


FIG. 18

1130 U.S. PTO
07/22/02

COPY OF PAPERS
ORIGINALLY FILED

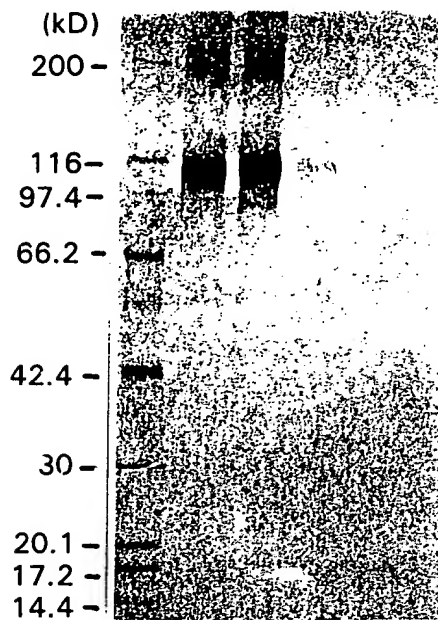


FIG. 19

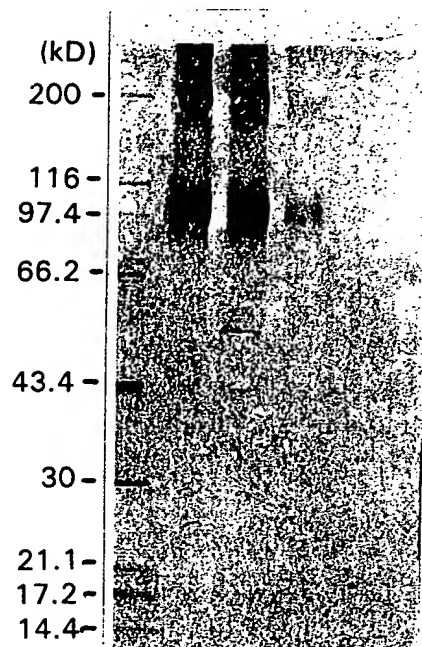


FIG. 21



RECEIVED
JUL 26 2002
TECH CENTER 1600/280

COPY OF PAPERS
ORIGINALLY FILED

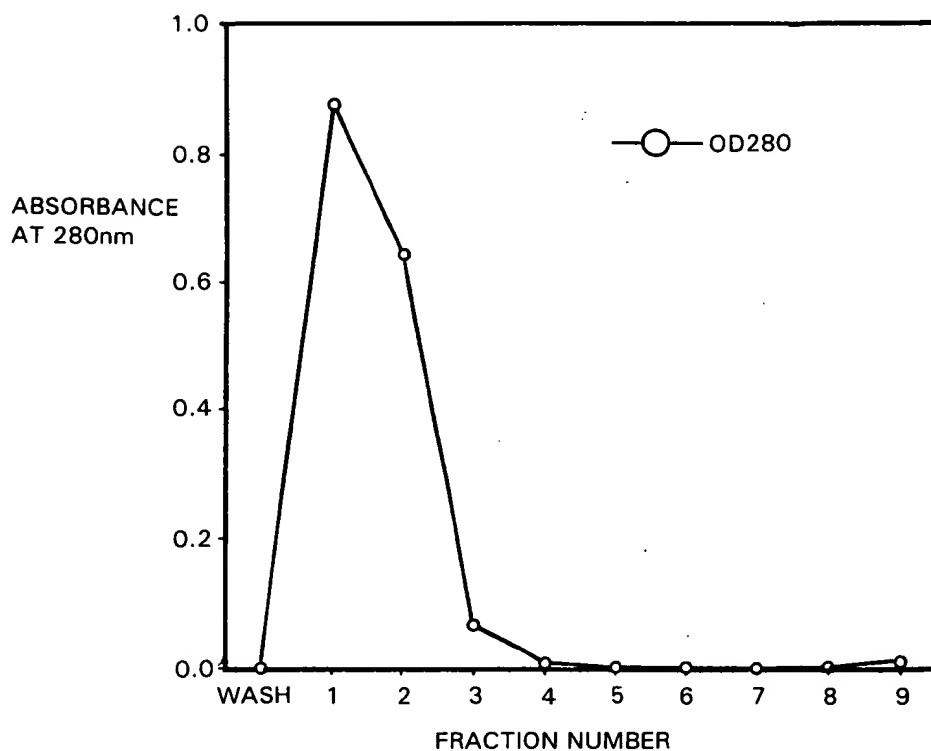
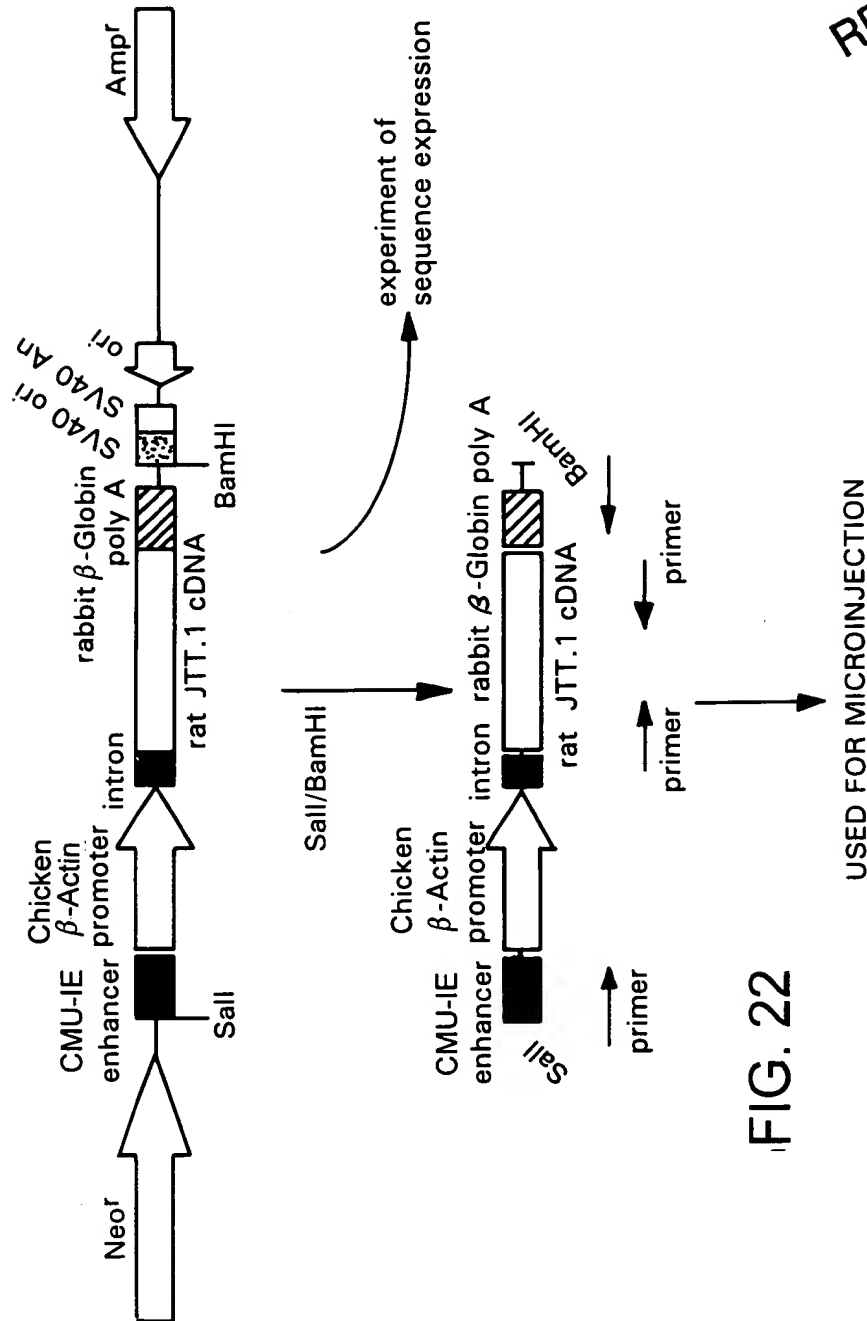


FIG. 20



RECEIVED
JUL 23 2002
TECH CENTER 1600/2900



1130 U.S. PTO
07/22/02

COPY OF PAPERS
ORIGINALLY FILED



FIG. 6A

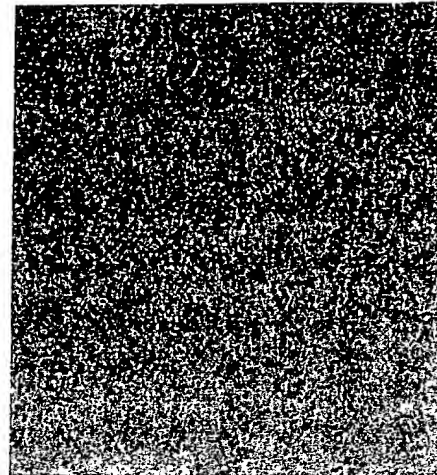


FIG. 6B

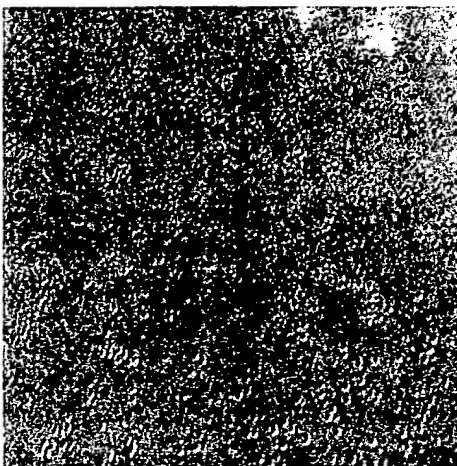


FIG. 6C

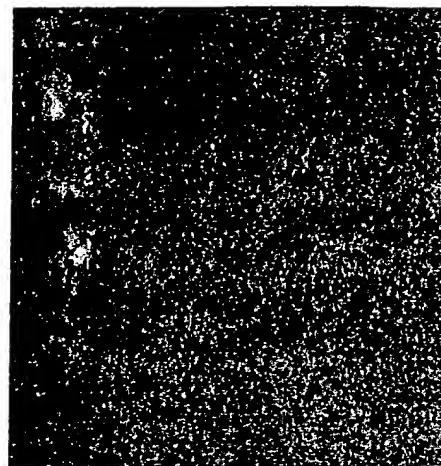


FIG. 6D